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(54) PRODUCTION OF HEAT-RESISTANT XYLOSE ISOMERASE

(57) Abstract:

PURPOSE: To enable the mass-production of a heat-resistant xylose isomerase useful for the production of a high-fructose corn syrup by culturing a xylose isomerase gene of Clostridium thermohydrosulfuricum and a specific microorganism.

CONSTITUTION: (A) A xylose isomerase gene of

Clostridium thermohydrosulfuricum (ATCC 33223) (producible by cloning to E.coli) and (B) Bacillus brevis (transformed with a plasmid of Bacillus brevis containing cell wall protein gene promoter) are cultured and the objective xylose isomerase is separated from the cultured product. The production yield of xylose isomerase of the present process is several hundred times as high as the yield attained by the use of unmodified C. thermohydrosulphuricum.

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